

## TYPE CERTIFICATE

**EASA.E.207**

This Type Certificate is issued by EASA, acting in accordance with Regulation (EC) No. 216/2008 on behalf of the European Community, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation and in accordance with Commission Regulation (EU) No. 748/2012 to

### **BRP-ROTAX GmbH & Co KG**

ROTAXSTRASSE 1  
4623 GUNSKIRCHEN  
AUSTRIA

and certifies that the product type design listed below complies with the applicable Type Certification Basis and environmental protection requirements when operated within the conditions and limitations specified on the associated:

Type Certificate Data Sheet Number: EASA.E.207

**Type Design:**

Rotax 642 Series

**Model:**

Rotax 642

**Date of Issue:**

11 November 1975

**For the European Aviation Safety Agency**

**Date of Issue: 05 September 2016**



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**Propulsion Section Manager**

**Acting Head of Propulsion, Parts & Appliances Dept.**

TYPE CERTIFICATE – 10026503 – BRP-ROTAX GmbH & Co KG – 301057





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## TYPE-CERTIFICATE DATA SHEET

No. E.207

**for**  
Rotax 642 series engines

**Type Certificate Holder**  
BRP-Rotax GmbH & Co KG

Rotaxstraße 1  
A-4623 Gunskirchen  
Austria

For Models:

Rotax 642



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## **I. General**

### **1. Type/ Model**

Rotax 642

### **2. Type Certificate Holder**

BRP-Rotax GmbH & Co KG  
Rotaxstraße 1  
A-4623 Günskirchen, Austria  
DOA EASA.21J.048

### **3. Manufacturer**

as above

### **4. Date of Application**

not known, before November 1975

### **5. EASA Type Certification Date**

Rotax 642
11.11.1975

Note: EASA type certificate for all these models is granted in accordance with article 2 paragraph 3(a) of EU Commission Regulation 1702/2003 replacing the BAZ/ACG Austria certification of these products (Austrian Type Certification no. TW 1/75)

## **II. Certification Basis**

### **1. EASA Certification Basis**

#### **1.1. Airworthiness Standards**

LFSM 1973, Appendix D, airworthiness requirements for engines of powered sailplanes issued by Luftfahrt-Bundesamt Braunschweig, BRD

#### **1.2. Special Conditions (SC)**

none

#### **1.3. Equivalent Safety Findings**

none



#### 1.4. Deviations

none

#### 1.5. Environmental Protection

none

### III. Technical Characteristics

#### 1. Type Design Definition

as defined the type design definition number 35.642.001

#### 2. Description

Fan cooled, 2 cylinder 2-stroke engine, mixture lubrication, dual ignition, belt driven propeller

Weight (dry):	45 kg
Bore:	76 mm
Stroke:	70 mm
Displacement:	635 cm <sup>3</sup>
Compression Ratio:	9:1
Crankshaft drive rotation:	counter clockwise (viewed from front)

#### 3. Equipment

Carburettor:	Bing central constant level carburetor 36 Ø Main jet: size 170 Needle jet: size 2.76 Jet needle: no. 46-284 Pos. 2
Fuel pump:	Bing diaphragm pump
Ignition system:	dual magnetic high-voltage condenser ignition, contact less (Bosch) Generator SCPK 422 12 V 100 W Ignition point 2 mm BTC
Spark plugs:	Bosch W 260 MZ 2
Starter:	rewind starter, Bosch pinon-starter
Power drive:	taper 1:10
Revolution measurement:	supply for an electronic tachometer, VDO



#### 4. Dimensions

not determined

#### 5. Dry Weight

45 kg

#### 6. Ratings

	PS	1/min
Take off power:	40	5400
max. continuous:	40	5400

#### 7. Fluids (Fuel, Oil, Coolant, Additives)

##### 7.1. Fuel

Fuel: regular gasoline min. 91 ROZ

Description	German	English
See Operator's Manual	HB-642	OM-642
See Service Instruction	n.a.	n.a.

##### 7.2. Oil

Lubrication: Mixture lubrication  
mixing ratio 1:25  
with super two stroke oil

Description	German	English
See Operator's Manual	HB-642	OM-642
See Service Instruction	n.a.	n.a.

##### 7.3 Coolant

Description	German	English
See Operator's Manual	HB-642	OM-642
See Service Instruction	n.a.	n.a.

#### 8. Aircraft Accessory Drives

none



#### **IV. Operating Limitations**

##### **1. Temperature Limits**

Cylinder head temperature	max. 250°C
measured with thermo couple under spark plug on hottest cylinder	

##### **2. Speed Limits**

max. RPM	5500
idling RPM:	approx. 1600

#### **V. Operating and Service Instructions**

<b>Description</b>	<b>German</b>	<b>English</b>
Operation- and Maintenance instruction	HB-642	OM-642
Installation Manual	n.a.	n.a.
Repair Manual	n.a.	n.a.
Service Bulletins, Service Instructions and Service Letters	n.a.	n.a.

#### **VI. Notes**

##### **Note 1: Fuel consumption**

At 100 % power approx. 16 l/h (5400 RPM) and at 75 % power approx. 10 l/h (4500 RPM).





**SECTION: ADMINISTRATIVE**

**I. Acronyms and Abbreviations**

ACG	Austro Control GmbH
AS 8020	Aerospace Standard: General minimum performance standards for generators/starter-generators and associated voltage regulators for use in direct current (DC) electric systems for civil aircraft
AVGAS	Aviation Gasoline
CHT	Cylinder Head Temperature
CT	Coolant Temperature
CW	clockwise
CCW	counter-clockwise
CS-E	Certification Specifications Engines
EASA	European Aviation Safety Agency
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulations
HIRF	High Intensity Radiated Fields
IM	Installation Manual
IPC	Illustrated Parts Catalog
JAR	Joint Aviation Requirements
JAR-E	Joint Aviation Requirements Engines
MMH	Maintenance Manual Heavy
MML	Maintenance Manual Line
OM	Operators Manual
OHM	Overhaul Manual
OHMA	Overhaul Manual, Appendix
rpm	revolutions per minute
RTCA	Radio Technical Commission for Aeronautics
SB	Service Bulletin
SI	Service Instruction
TBO	Time between Overhaul
TCDS	Type Certificate Data Sheet
TCU	Turbo Control Unit



## II. Type Certificate Holder Record

Before June 15, 2016	BRP-Powertrain GmbH & Co KG Rotaxstraße 1 A-4623 Gunskirchen Austria DOA EASA.21J.048
Before March 15, 2014	BRP-Powertrain GmbH & Co KG Welser Straße 32 A-4623 Gunskirchen, Austria DOA EASA.21J.048
Before February 3, 2009	BRP-Rotax GmbH & Co. KG Welser Straße 32 A-4623 Gunskirchen, Austria DOA EASA.21J.048
Before June 16, 2004	Bombardier-Rotax GmbH & Co. KG Welser Straße 32 A-4623 Gunskirchen, Austria
Before December 29, 2001	Bombardier-Rotax Gesellschaft mbH Welser Straße 32 A-4623 Gunskirchen, Austria

## III. Change Record

Issue	Date	Changes	TC issue
Issue 01	26 February 2010	Initial Issue	Initial Issue, 26 February 2010
Issue 02	14 May 2014		
Issue 03	05 September 2016	Name change to BRP-Rotax GmbH & Co KG as of June 15, 2016	05 September 2016

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